suddenly, followed by dry gangrene, the line of demarcation finally forming about the middle of the leg. Examination of the bloodvessels after amputation showed evidence of endarteritis of the popliteal artery with a thrombus 1 cm. above its bifurcation, extending into both the anterior and posterior tibial arteries. Pure cultures of the streptococcus pyogenes were obtained from the pus of an otitis media and from a furuncle on the face.

According to the author's researches in the literature only two other cases of gangrene following scarlatina have been recorded. Both these occurred in children and involved both legs. In the course of this study 166 cases of gangrene following infectious diseases were collected, of which the greatest number followed typhus, 42; typhoid, 40; and influenza, 19. Of the rarer instances 10 were found following pneumonia, 5 after measles, 1 after varicella, and 1 after diphtheria.

Treatment of Adenoid Vegetations.—LAPEYRE (*Société de Pædiatrie*, Séance, October 8, 1901; *Revue Mensuelle des Maladies de l'Enfance*, November, 1901, p. 530) calls attention to the good effects he has secured in the treatment of adenoid vegetations by the internal administration of compound tincture of iodine. He commences with six drops three times a day, and gradually increases the dose, according to the age, until thirty to fifty drops are given. Despite these high doses he has never observed accidents. Atrophy and disappearance of the vegetations have been observed in a large number of cases.

The Use of Artificial Serum as a Means of Prognosis in Diphtheria.—In a series of observations covering the use of subcutaneous injections of artificial serum in infectious diseases, especially diphtheria, RABOT and BONNAMOUR (*Lyon Médical*, 1901, No. 34) have brought out the fact that the reaction of the patient to such injections may be taken as an almost infallible indication of the favorable or unfavorable outcome of the case. If, after the injection a prompt diuresis occurs, without vomiting or diarrhœa, the outcome of the disease will be benign, whatever the general state of the patient; if, on the contrary, after injection the quantity of urine is not increased, and vomiting or diarrhœa occur, the prognosis is fatal, even though the child may seem to be doing well at the time. In all the cases tested in this way by the authors the disease terminated in accordance with this law. Sometimes a first injection has indicated a bad prognosis, even when the child's general condition seemed excellent; but a second injection has given the same response, which did not fail soon to be confirmed. In illustration of the certainty of prognosis under these conditions, the authors detail a case of diphtheria in a child, who, even after the injection, passed scarcely 300 grammes of urine in twenty-four hours, and had frequent vomiting attacks. He was apparently in good condition, however, laughing and playing about the bed. Despite the employment of several diuretics, including theobromine and lactose, and the use of saline intestinal injections, the excretion of urine did not increase, and death occurred on the eleventh day.

Despite the certainty of prognosis thus early indicated, treatment should not be neglected. The serum test indicates the condition of the kidneys, and every effort should be made to favor the elimination of toxins. Diuretics should be employed, lactose in particular and lavements of salt solution. The general state and fever, if present, should receive attention. Further injections of artificial serum should be avoided, since they can only aggravate the conditions by producing an excessive increase of blood tension.

By observation of the reaction produced by subcutaneous injections of artificial serum, one may gain definite knowledge of the state of the heart and of the degree of infection, and thus may be established an almost certain prognosis in embarrassing cases, so frequent in the diseases of children, in which the general state does not correspond with the local, and *vice versa*.

A Simple Procedure for Increasing the Amount of Fat in Diluted and Sterilized Cow's Milk.—ROMANOFF (*Vratch*, September 1, 1901) suggests a method for accomplishing such a modification which does not seem to possess any advantage over our more accurate laboratory methods. Fresh milk is diluted with an equal part of oatmeal-water containing 4 per cent. of sugar. The mixture is poured into six bottles, sterilized in Soxhlet's apparatus for ten minutes, and then placed on ice for from two to three hours. The bottles are then carefully removed, without shaking, and the lower half of the milk in each bottle is siphoned off. The remaining milk is shaken, warmed, and given to the infant. This upper milk is said to show three or four times as much fat as the part removed by siphoning, being estimated at from 2.9 to 3.6 per cent.

[As this method makes no provision for varying modifications of the proteid percentage, which in this mixture must be constantly about 1.50 to 1.75 per cent., a percentage which many infants cannot digest in the earlier months of life, it would seem that the product offers little advantage over other mixtures of the same kind, excepting, perhaps, in previous sterilization (which may be undesirable), and in the fact that the emulsion of the fats is little disturbed (also a gain of little practical importance in most cases). The inflexibility of the sugar percentage is also another defect.—T. S. W.]

THERAPEUTICS.

UNDER THE CHARGE OF

REYNOLD WEBB WILCOX, M.D., LL.D.,

PROFESSOR OF MEDICINE AND THERAPEUTICS AT THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL; VISITING PHYSICIAN TO ST. MARK'S HOSPITAL,

AND

SMITH ELY JELLIFFE, M.D., PH.D.,

PROFESSOR OF PHARMACOGNOSY AT THE COLLEGE OF PHARMACY; CLINICAL ASSISTANT AT THE VANDERBILT CLINIC (COLUMBIA UNIVERSITY), NEW YORK.

The Analgesic Antipyretics.—DR. G. POUCHET gives a valuable practical summary of the analgesic antipyretics, based on the relation of their physiological action to their chemical structure. He divides them into six groups, as follows: (1) *Quinoline group*, to which belong analgine, kairine, thalline, cupreine, quinine, euquinine, and chinaphtol; (2) *Pyrol group*, in which are found antipyrine and its salts, analgesine, acetopyrine, tolypyrine, tolysal, pyramidon, anilipyrine, quinopyrine, ferropyrine; (3) *Hydrazine group*, phenylhydrazine, pyroidine, antithermine; (4) *Aniline group*, aniline, diphenylamine, and other secondary amines, acetanilid, exalgine, euphorine, thermodine and neurodine; derivatives of para-amidophenol, phenacetine, triphene, lactophenine, citrophen, malakine, kyrofine, phenosal, cosaprine, phesine, phenocol, eupyrine and pyrantine; (5) *Aromatic acids*, benzoic, salicylic, benzacetine, aspirine, asaprol; and (6) *Alcohols* and *Phenols*. Of the first group the author believes that quinine is the only one that merits serious attention, the others having fallen by the wayside. In the second group antipyrine is the most important. The hydrazine group merits close attention, particularly because of the number of compounds which act prejudicially on the organism. Particularly all of the derivations of phenylhydrazine act upon the hæmoglobin of the blood, either to fix it and diminish oxidation or to cause hæmolysis. Antipyresis by such agents is not to be commended. The fourth group, the anilines, is perhaps the most important, containing the largest number of compounds. Many of this group have antiseptic actions as well; in fact, in some the antiseptic action overshadows any other for which it may be employed—thus the action of methylene blue on the malarial plasmodium is an example. Others of the group, acetanilid, phenacetine, are more employed for their analgesic action than for antipyresis. The aromatic acids, benzoic and salicylic, are closely allied, but benzoic acid being less readily broken up, oxidized, or eliminated is less of an antipyretic or analgesic, although an excellent urinary antiseptic. The salicylates, however, have marked analgesic powers, aspirine (salacetic acid), fulfilling most of the indications of this drug very acceptably. In the sixth group antiseptic action is the keynote, rather than analgesia or antipyresis. The author then discusses in detail the principles of the fascinating subject of the introduction of certain radicals into compounds and the resultant pharmacodynamic actions, a subject so ably discussed by recent advanced pharmacologists.—*Bulletin Général de Therapeutique*, 1901, vol. cxlii., p. 917.

Veratrum Viride in Pneumonia.—DR. T. G. STEPHENS believes in this drug for the treatment of pneumonia. In a series of fifty-four cases of pneumonia he reports fifty recoveries and four fatalities. The fatal results were necessarily so from the start. Norwood's tincture has given him the best results, and he employs the following formulæ: Tincture of veratrum viride (Norwood), 1; wine of ipecac or spirit of nitrous ether, 2. Ten drops every three hours, in a little water; increased one or two drops each dose. Tincture of veratrum viride (Norwood), 1; compound syrup of squill, 2. Same dose as above. Tincture of veratrum viride (Norwood), 2; tincture of aconite root, 1; syrup of tolu, 4. Fifteen drops every three hours, increasing three drops each dose.—*Therapeutic Gazette*, 1901, vol. xxv., p. 731.

Pulmonary Hemorrhages and Gelatin Injections.—DRS. A. HAMMELBACHER and O. PISCHINGER, in two case of hæmoptysis, report successful treatment by means of subcutaneous injections of 2½ per cent. gelatin solution.—*Münchener med. Wochenschrift*, 1901, vol. xlviii., p. 2000.

[In this connection it may be well to bear in mind that in the same journal Dr. F. Kühn calls attention to the dangers which may arise from the use of these gelatin solutions if they are not absolutely sterile. He there reported a fatal case of tetanus following the use of gelatin which had been used to relieve a severe hemorrhage following adenoid operations.—R. W. W.]

Some New Preparations of Valerian.—DRS. H. KIONKA and A. LIEBRECHT say that the uncertainty of the action of valerian is wholly due to the instability of the preparations. Inasmuch as the fresh leaves are not always obtainable, with which to make comparatively stable preparations, they prepared a synthetic combination with ethylamid, producing a diethylenamid valerianate (CH_3, CH_2, CH_2, CH_2, N, C_2H_5). In lower animals, frogs, etc., convulsions and paralysis result from its use; in cats and dogs, much mental excitement, not due to the odor, may be added; in man but few effects were noted. In hysteria, neuralgias, hæmicrania, neurosis of traumatic origin, and in the nervous symptoms of the menopause and pregnancy the drug acted well. Its field of usefulness might be extended to the milder types of melancholia.—*Deutsche med. Wochenschrift*, 1901, vol. xxvii., p. 849.

Treatment of Rheumatism.—DR. D. K. COVERLEY presents in *résumé* some of the phases of evolution in the manufacture and use of anti-rheumatic remedies. The objections to salicylic acid being many, the search for substitutes has been both active and prolific. Salol, salophen, salocoll, and aspirine have each been used and found effective in particular cases. The author makes a special plea for acetyl-salicylic acid, aspirine, which he has found agreeable and non-irritating. In alkaline media it liberates salicylic acid in a nascent state, and is an efficient analgesic, anti-rheumatic, and anti-pyretic. The clinical histories of six cases are reported.—*Therapeutic Gazette*, 1901, vol. xxv., p. 729.

Renal Tension and its Treatment.—DR. REGINALD HARRISON first drew attention to the fact that some cases in which the patient suffered from albuminuria and other renal symptoms that might have been produced by a stone or other removable causes had completely recovered after an exploratory operation on the kidney by puncture or incision, although no calculus or recognizable cause was discovered. This observation led by natural steps to a further generalization that tension might be an important factor in the production of some forms of renal disease. This deduction he finds to be corroborated by the testimony of many modern writers, and he draws certain analogies between the effects of intra-ocular tension in glaucoma and its effects on the retinal nerve cells and the effects of increased renal tension on the kidney parenchyma. However capable of gradual distention the kidney capsule may be, he believes that without doubt it is very intolerant of sudden increases of intrarenal tension, and experience gained by operation on the kidney has taught him that in certain conditions of congestion the capsule is so tightly stretched and its substance exposed to such pressure as quite to explain any interference with its function. Direct surgical intervention is therefore of value in such cases, and the problem arises as to